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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,457	10/20/2000	Takashi Ida	198803US2SRD	6204

22850 7590 11/19/2003

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ALEXANDRIA, VA 22314

EXAMINER

LE, BRIAN Q

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/692,457

Applicant(s)

IDA ET AL.

Examiner

Brian Q Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 4-7 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the claims of the present application would have to be searched in only a handful of sub-classes and electronic searching eliminates serious burden on the Examiner. This is not found persuasive because the claims of the present application were found distinct, see MPEP 806.05(d). In addition, MPEP has no provision of whether electronic searching eliminates substantial addition effort. Also with the exponential growth of patent publication, a sub-class may consist of several thousands of patents. The Examiner may have to search through all the patents in each subclass to look for a specific claimed limitation.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sambonsugi U.S. Patent 6,335,985.

Regarding claim 4, Sambonsugi teaches an object extraction method (abstract, last 3 lines; FIG. 1, element 2; FIG. 27, element 224) comprising the steps of:

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Comparing each portion of first image data obtained by capturing an extraction object with another portion of the first image data or second image data (FIG. 47, S14), thereby generating shape data as an image representing a provisional region of the extraction object in the first image data (FIG. 47, S22, S23, and S25); and

Matching a contour of the shape data to a contour of the extraction object by using the first image data and the provisionally generated shape data (FIG. 48, S31-S36).

Regarding claim 5, Sambonsugi teaches the method wherein the shape data generating step comprises determining a plurality of candidate regions in advance (FIG. 47, S13 and S24) and, when the candidate regions are selectively set in the first image data, setting a candidate region, as a provisional region of the extraction object, which exhibits a largest difference (absolute difference or difference) between a statistical characteristic of inside pixel values (texture picture) and that of outside pixel values (background picture) (column 40, lines 5-20; column 43, lines 10-30; column 6, lines 62-63). It is the exhibition of largest difference when the object extraction method is trying to obtain the difference of pixel values between the texture and the background of the image because for each comparison of pixel values between each pixel of texture and background; the object extraction method is processing the largest difference in pixel value respectively in order to extract the object. Furthermore when compare the image pixel values to be greater than the threshold's value; it is an indication of processing a largest difference (column 43, lines 25-33) of pixel value between object image and texture image. In addition, the determination of absolute difference between the picture data and background picture is also a process of finding the largest difference.

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Referring to claim 6, Sambonsugi further teaches a method wherein the shape data generating step comprises comparing current input image data corresponding to the first image data with background image data corresponding to the second image which is acquired in advance without capturing the extraction object, and setting a region in which the current input image data differs in value from the background image data as a provisional region of the extraction object (FIG. 47, S14; FIG. 8; FIG. 13, FIG. 14A-B and FIG. 15).

For claim 7, Sambonsugi teaches a method wherein the first step comprises holding image data of a frame from which a region of the extraction object has already been obtained and shape data as reference image data and reference shape data, respectively, performing motion detection with respect to the current input image data corresponding to the first image data by referring to the reference image data, and performing motion compensation for the reference shape data on the basis of the motion detection result, thereby generating the provisional shape data (FIG. 5; FIG. 6 and FIG. 47, S11).

CONCLUSION

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to object extraction and segmentation:

U.S. Pat. No. 5,247,583 to Kato, teaches image segmentation method and apparatus.

U.S. Pat. No. 4,183,013 to Agrawala, teaches system for extracting shape features from an image.

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U.S. Pat. No. 6,332,038 to Funayama, teaches image processing device for image extraction.

U.S. Pat. No. 6,453,069 to Matsugu, teaches method of extracting image from input image using reference image.

U.S. Pat. No. 6,535,632 to Park, teaches image processing in His color space using adaptive noise filtering.

U.S. Pat. No. 5,604,820 to Ono, teaches method for extracting object images and method for detecting movements.

U.S. Pat. No. 5,995,649 to Marugame, teaches dual-input image processor for recognizing, isolating, and displaying specific objects from the input images.

U.S. Pat. No. 5,930,391 to Kinjo, teaches method of extracting a region of a specific configuration and determining copy conditions.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC Customer Service whose telephone number is 703-306-0377.

BL
November 11, 2003



**SAMIR AHMED
PRIMARY EXAMINER**